

Process Sheet

Date: Tuesday, 12/6/2005 11:13:37 AM
User: Kim Johnston

Customer : CU-DAR001 Dart Helicopters Services
Job Number : 25111
Estimate Number : 10019
P.O. Number : N/A
This Issue : 12/6/2005 S.O. No. : N/A
Prsht Rev. : NC
First Issue : 12/6/2005 Type : MACHINED PARTS
Previous Run :
Written By : SEE COMMENT BELOW
Checked & Approved By : SEE ABOVE USER & DATE
Comment : Est Rev:H Removed P/O For Material 05-10-26 JLM

Drawing Name : BLADE FITTING
Part Number : D27421
Drawing Number : D2742 REV B1
Project Number : N/A
Drawing Revision : B1
Material : N/A
Due Date : 1/15/2006
Qty: 25 Um: 12 Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6103001 7075-T651 3.25OD x 12.5L



Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)
7075-T651 3.25OD x 12.5L
(D6103-001 BLANK)
Batch : 25069 / 24640

2.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Issue P.O. 378 to turn only per drawing

Comment: MORI SEIKI CNC LATHE LARGE
TURN AS PER FOLIO FA099 & DSK050
FOLIO REV: 13
DWG REV: 13

Receive + Inspect

C Loc 10/1/30

25

3.0 QC6 INSPECT PARTS AS THEY COME OFF MACHINE



QC6



25 06.02.01.

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1
1-MACHINE AS PER FOLIO FA099 & DWG D2742
FOLIO REV: 13
DWG REV: 13

EP1

2-DEBURR & TUMBLE

EP1

06/02/06

QC

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 25111

Part Number: D27421

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

Ep 46 06/02/06

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

mf 06/02/06

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Chemical Conversion Coat as per QSI 005 4.1

a.m 06-04-17 ①

2-Powder Coat White (Ref: 4.3.5.2) as per QSI 005 4.3

a.m 06-04-17 ①

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DL 06/04/17 ①

9.0

ALS41032225

Insert



Comment: Qty.: 4.0000 Each(s)/Unit Total : 48.0000 Each(s)

Pick:

Qty

Part Number

Description Batch

4

ALS4-1032-225

Insert

M18293

or AKS4-1032-225

or ALS7-1032-225

or AKS7-1032-225

a.m 06-04-18 ①

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install ALS4-1032-225 Insert as per Dwg D2742

a.m 06-04-18 ①

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

u 06/04/19 ①

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 25111

Part Number: D27421

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL
Inspection Level 21

SP 06/04/19

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 06/04/19
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/02/05	#4	one BLADE fitting has a dim of 0.972" instead of dim 1.000". Part Didnt sit properly in S.S.	CP 06.02.17 per QS1442	No e-mail sig. PART IS ACCEPTABLE PER ATTACHED EMAIL	ED 06/02/06	2 06.01.17	CP 06.02.17 per QS1442	2 06.01.17
06/02/06	#2.0	one part scrap inside Box has 0.040" deep chatter marks. Done @ metric	CP 06.02.17 per QS1442	Scrap / destroy. Notify Metac of the chatter marks for possible credit.	En 06/02/06	2 06.02.06	CP 06.02.17 per QS1442	2 06.02.06

NOTE: Date & initial all entries

Chris Provencal

From: David Shepherd [davids@dartaero.com]
Sent: February 16, 2006 4:46 PM
To: Chris Provencal
Subject: Re: D2742-1 Blade Fitting NCR

Based on your analysis, the parts with a 0.970" thickness are acceptable.

David

----- Original Message -----

From: "Chris Provencal" <cprovencal@dartaero.com>
To: "'David Shepherd'" <davids@dartaero.com>
Sent: Thursday, February 16, 2006 1:30 PM
Subject: RE: D2742-1 Blade Fitting NCR

> Dart
> $\text{Mu} = 81000 * 0.210 / 0.458 = 37140$
> $\text{My} = 71000 * 0.210 / 0.458 = 32555$
>
> EC
> $\text{Mu} = 66500 * 0.231 / 0.471 = 32615$
> $\text{My} = 61300 * 0.231 / 0.471 = 30064$
>
>

CP 06.02.16

> -----Original Message-----

> From: David Shepherd [mailto:davids@dartaero.com]
> Sent: February 16, 2006 2:44 PM
> To: Chris Provencal
> Subject: Re: D2742-1 Blade Fitting NCR
>
>

> Chris,

>
> Can you give me these numbers in terms of $\text{Mu} = \text{Ftu} \times \text{I/c}$ and $\text{My} = \text{Fty} \times \text{I/c}$
> comparing the modified Dart to the Eurocopter.

> Thanks,
> David
>
>

> ----- Original Message -----

> From: "Chris Provencal" <cprovencal@dartaero.com>
> To: <davids@dartaero.com>
> Sent: Thursday, February 16, 2006 12:25 PM
> Subject: RE: D2742-1 Blade Fitting NCR
>
>

> > From solidworks, the inertia of the nominal blade fitting is 0.231.
With

> > 0.970" thickness it reduces to 0.210.

> >

> > From SR-D350-636, the dart blade fitting has a $\text{Ftu} = 81000 * 0.210 / 230 = 73956$,

> > which is still larger than the Eurocopter $\text{Ftu} = 66500$. The dart blade
> > fitting has $\text{Fty} = 71000 * 0.210 / 0.230 = 64826$, which is still larger
than

> > the Eurocopter $\text{Fty} = 61300$.

> >

> > Therefore I think it is acceptable.

> >
> > Chris
> >
> >
> > -----Original Message-----
> > From: Chris Provencal [mailto:cprovencal@dartaero.com]
> > Sent: February 15, 2006 8:58 AM
> > To: 'davids@dartaero.com'
> > Subject: D2742-1 Blade Fitting
> >
> > Dave, the D2742-1 Blade Fitting, the part with the two holes (where the
> > stinger attaches to) should be 1.000" thick, on one it is 0.970" thick.
> >
> > Sincerely,
> > Chris Provencal
> > DART Aerospace Ltd.
> > Email..cprovencal@dartaero.com
> > Phone...613-632-3336
> > Fax.....613-632-4443
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